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Timber Resource Statistics for the Olympic Peninsula, Washington

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Abstract

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This report summarizes a 1978-79 timber resource inventory of five counties in the Olympic Peninsula of Washington: Clallam, Grays Harbor, Jefferson, Mason, and Thurston. Detailed tables of forest area, timber volume, growth, mortality, and harvest are presented.

KEYWORDS: Forest surveys, statistics (forest), timber resources, resources (forest), Washington (Olympic Peninsula).

Summary

The Olympic Peninsula, Washington, resource area (Clallam, Grays Harbor, Jefferson, Mason, and Thurston Counties) totals 4,567,000 acres (1 848 000 ha), of which an estimated 3,953,000 acres (1 600 000 ha) are forested. An estimated 3,092,000 acres (1 251 000 ha) are classified as timberland. The area has 14.6 billion cubic feet (414 million m^3) of standing timber with 47 percent of this volume in public ownership.

Preface

Renewable Resources Evaluation (formerly Forest Survey) is a nationwide project of the USDA Forest Service authorized by the Forest and Rangeland Renewable Resources Research Act of 1978. Work Units of the project, located at Forest Service Experiment Stations, conduct forest resource inventories throughout the 50 States. The Pacific Northwest Forest and Range Experiment Station at Portland, Oregon, is responsible for inventories in the States of Alaska, California, Hawaii, Oregon, and Washington.

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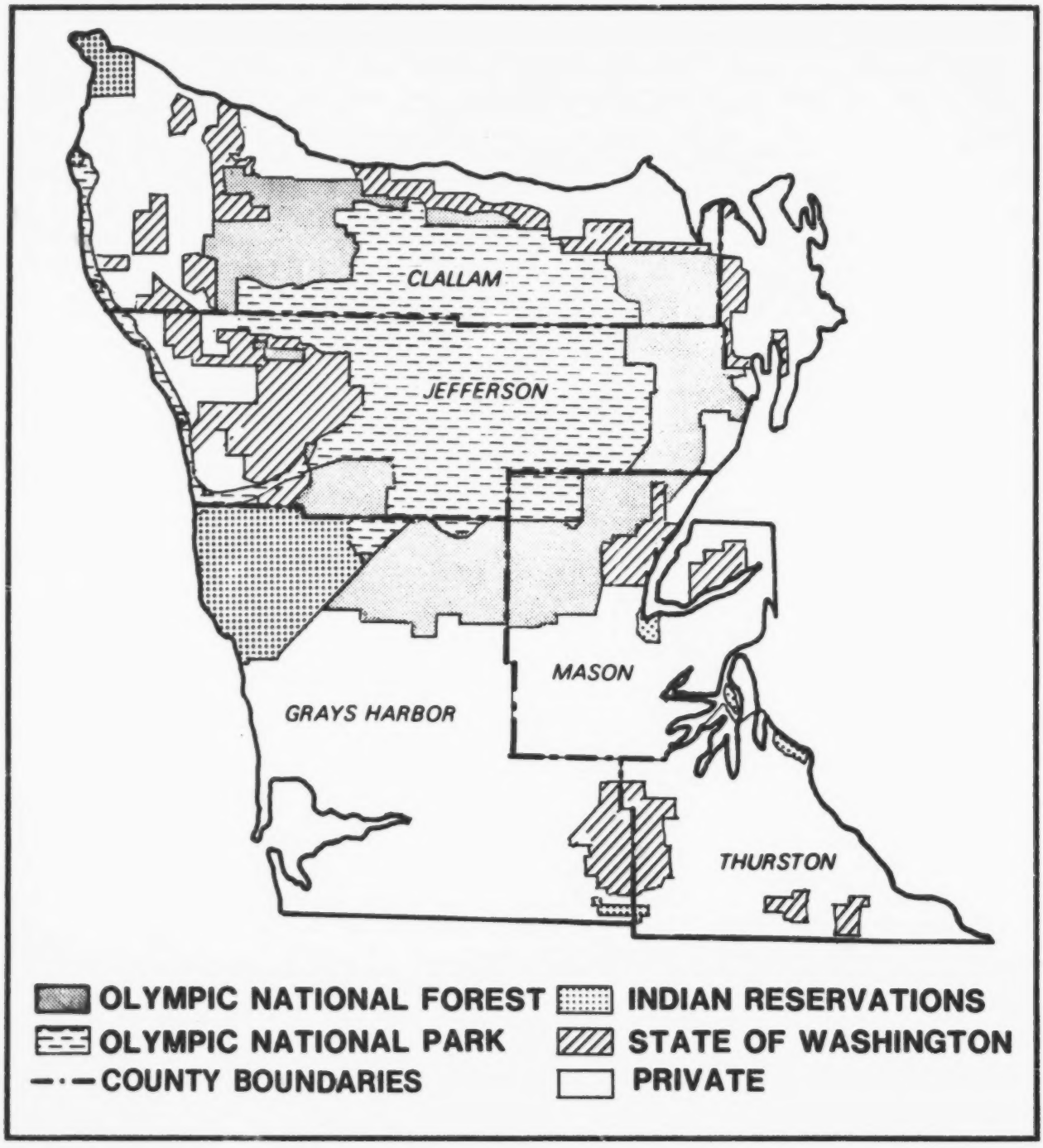

Introduction

This report presents statistics from a 1978-79 inventory of timber resources for five counties in the Olympic Peninsula of Washington: Clallam, Grays Harbor, Jefferson, Mason, and Thurston. Previous inventories of these counties were made in 1932, 1937-40, 1951-60, and 1965.

Field data for all lands except National Forests were collected by the Renewable Resources Evaluation Work Unit (RRE) of the Pacific Northwest Forest and Range Experiment Station. National Forest inventory data included in this report are for all lands administered by the Olympic National Forest. The data were collected in 1974 by National Forest personnel and exclude estimates of volume, growth, and mortality on deferred lands.

Scientific names of trees (Little 1978) are listed on page10 of this report.

Inventory Procedures

This report of forest resources in Washington's Olympic Peninsula combines inventory data from two sources: (1) a 1974 inventory of the Olympic National Forest; (2) an inventory of State, county, municipal, Indian trust, and private forest lands conducted by RRE in the summer and fall of 1978 and 1979.

In the Olympic National Forest, all areas of timberland, other forest land, reserved lands, and nonforest land were mapped by delineation on aerial photos. Timberland areas were systematically sampled with 552 field plots, arranged in a 1.2-mile (1 931-m) square grid. The field plots, each a cluster of ten variable-radius points distributed over about 1 acre (0.4 ha), are the basis for estimates of timber volume, growth, mortality, and area attributes such as forest type, site class, and stand size class.[1]

For all lands **other than National Forest,** the sampling design used was double sampling for stratification (Cochran 1963). A total of 6,481 photo points were classified to estimate area by owner group, major land class (timberland, other forest, nonforest), and stand volume class. We visited 411 field plots, located on a 3.4-mile (5 473-m) square grid, to correct the photo sample and to determine forest characteristics. On timberland locations, part of the 1965 10-point cluster plot was remeasured to determine growth and mortality. At the same general location, a new 5-point cluster plot, spread over about 8 acres (3 ha), was established to determine current volume, growth, and condition of the forest stand (MacLean 1980).

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[1]Resource Planning and Timber Management staffs, Mount Baker-Snoqualmie and Olympic National Forests. Region 6 area one timber inventory project plan (2410). 1974. Unpublished report. 40 pages.

Reliability of Inventory Data

The timberland area of the Olympic National Forest was determined from mapping and is not subject to sampling error. With that exception, all area and volume statistics reported are based on sampling and are subject to sampling error. Confidence intervals (0.68 probability level) for the estimated timberland area, cubic-foot volume, and net annual cubic-foot growth by ownership class are as follows:

Owner	Timberland area	Net volume	Net annual growth
	Thousand acres	*Million cubic feet*	
National Forest	538 ± 0	2,978 ± 82	15 ± 1
Other public	759 ± 19	3,960 ± 303	145 ± 13
Forest industry	1,215 ± 20	5,893 ± 354	225 ± 11
Other private	580 ± 24	1,791 ± 174	67 ± 6
All owners	3,092 ± 26	14,621 ± 491	452 ± 18

Confidence intervals are quantitative expressions of the reliability of the timberland area, volume, and growth statistics. The above tabulation, for instance, indicates a two-in-three chance that there are between 3,066,000 and 3,118,000 acres of timberland in the Olympic Peninsula, Washington.

Confidence intervals vary with both size of the estimate and variance of the item being estimated. If variance is assumed constant, confidence bounds can be approximated for estimates of various sizes. The confidence interval guides that follow assume an average relationship between variance and the size of the estimates, and thus provide only an approximation of the reliability of individual estimates.

	Confidence interval for other than National Forest land	
Timberland area	By owner[2]	By type or class[2,3]
Thousand acres		
1,000	± 20	± 74
800	± 18	± 67
600	± 16	± 58
400	± 13	± 48
200	± 10	± 35
100	± 7	± 25
50	± 5	± 18
25	± 4	± 13
15	± 3	± 10
10	± 2	± 9
5	± 2	± 6

Terminology

Confidence intervals

For net volume estimates of various sizes [2]			For net annual growth estimates of various sizes [2]		
	Other than National Forest	National Forest		Other than National Forest	National Forest
	Million cubic feet			*Thousand cubic feet*	
6,000	± 378	—	200,000	± 13,100	—
4,000	± 316	—	100,000	± 9,600	—
2,000	± 232	± 70	50,000	± 6,900	—
1,000	± 168	± 52	25,000	± 4,900	—
800	± 151	± 47	15,000	± 3,700	± 1,200
600	± 132	± 42	10,000	± 3,000	± 1,000
400	± 107	± 35	5,000	± 1,900	± 700
200	± 74	± 26	1,000	± 600	± 300
100	± 48	± 19	500	± 300	± 200
50	± 29	± 13	100	± 100	± 100
25	± 14	± 9	10	± 10	± 10
15	± 7	± 7			
10	± 6	± 5			
5	± 4	± 3			
2	± 1	± 1			
1	± 1	± 1			

Actual confidence intervals have been calculated for most of the tabular data in this report; they are available on request.

[2]Constant variance is assumed.

[3]Applies to breakdowns of the total estimated timberland areas such as site class, stand size class, and forest type.

Class of timber—A classification of trees as growing stock, cull, and salvable dead. Growing stock trees are subdivided into poletimber and sawtimber trees.

Codominant trees—Live trees with crowns forming the general level of the crown canopy and receiving full light from above but comparatively little from the sides; usually with medium-size crowns more or less crowded on the sides.

Commercial species—A tree species suitable for industrial wood products.

Cull trees—Live trees of noncommercial species, or live trees of commercial species that are more than 75-percent defective and are unlikely to become growing stock.

Cull trees, rotten—Cull trees with defect caused primarily by rot.

Cull trees, sound—Trees of noncommercial species or cull trees of commercial species with defect caused primarily by poor form, roughness, etc.

Diameter class—A classification of trees based on diameter outside bark measured at breast height, 4-½ feet (1.37 m) above the ground. D.b.h. is the common abbreviation for "diameter at breast height."

Dominant trees—Live trees with crowns extending above the general level of the crown canopy and receiving full light from above and partly from the side; larger than the average trees in the stand and with crowns dense, comparatively wide and long, but somewhat crowded on the sides.

Forest industry lands—Lands owned by companies or individuals operating wood-using plants.

Forest land—Land at least 10 percent stocked by live trees or land formerly having such tree cover and not currently developed for nonforest use.

Forest types—Stands with 50 percent or more stocking in live conifer trees are classed as softwood types. Stands with a majority of stocking in live hardwood trees are classed as hardwood types. Within these two groups, the individual forest type is determined by plurality of stocking by species of live softwood or hardwood trees.

Growing stock trees—All live trees with the exception of cull trees.

Growing stock volume—Net volume in cubic feet of live sawtimber and poletimber growing stock trees from stump to a minimum 4-inch top (of central stem) outside bark. Net volume equals gross volume less deduction for rot and missing bole sections.

Hardwoods—Trees that are angiosperms, usually broad-leaved and deciduous.

Industrial wood—All commercial roundwood products except fuelwood.

International ¼-inch rule—The standard board-foot log rule adopted nationally by the USDA Forest Service for the presentation of inventory volume statistics.

Land area—Area reported as land by the Bureau of the Census. Total land area includes dry land and land temporarily or partially covered by water such as marshes, swamps, and river flood plains; streams, sloughs, and canals less than ⅛-mile (200 m) wide; and lakes, reservoirs, and ponds less than 40 acres (16 ha) in area.

Land class—A classification of land by major use. The minimum size area for classification is 1 acre (0.4 ha).

Mean annual increment—A measure of the productivity of forest land in terms of the average increase in cubic-foot volume per acre per year. For a given species and site index the average is based on the number of years needed for the mean annual increment to culminate in fully stocked stands.

Mortality—Volume of sound wood in trees dying from natural causes during a specified period.

National Forest lands—Federal lands which have been designated by Executive order or statute as National Forest or purchase units and other lands under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III lands.

Net annual growth—The net increase in volume of trees during a specified year. Components of net annual growth of trees: (a) the increment in net volume of trees alive at the beginning of the specified year and surviving to the year's end, plus (b) the net volume of trees reaching sawtimber or poletimber size during the year, minus (c) the net volume of trees that died during the year.

Noncommercial species—A tree species not suitable for industrial wood products.

Nonforest land—Land that has never supported forests or was formerly forested and is currently developed for nonforest uses. Included are lands used for agricultural crops, Christmas tree farms, improved pasture, residential areas, city parks, improved roads, operating railroads and their right-of-way clearings, powerline and pipeline clearings, streams over 30 feet (10 m) wide, and 1- to 40-acre (0.4- to 16- ha) areas of water classified by the Bureau of the Census as land. If intermingled in forest areas, unimproved roads and other nonforest strips must be more than 120 feet (35 m) wide, and clearings or other areas must be 1 acre (0.4 ha) or larger in size to qualify as nonforest land.

Nonstocked areas—Timberland less than 10 percent stocked with growing stock trees.

Other forest land—Forest land incapable of producing 20 cubic feet per acre per year of industrial wood because of adverse site conditions such as sterile soils, dry climate, poor drainage, high elevation, steepness, or rockiness.

Other private lands—All privately owned lands except those classed as forest industry lands.

Other private lands, farmer—Lands owned by operators of farms.

Other private lands, miscellaneous—Privately owned lands other than those owned by the forest industry or farmers.

Other public lands—Lands administered by public agencies other than the Forest Service.

Poletimber stands—Stands with a mean diameter (weighted by basal area) from 5.0-9.0 inches (12.5-22.5 cm) if softwood and from 5.0-11.0 inches (12.5-27.5 cm) if hardwood.

Poletimber trees—Live trees of commercial species at least 5.0 inches (12.5 cm) in d.b.h. but smaller than sawtimber size, and of good form and vigor.

Roundwood—Logs, bolts, or other round sections cut from trees.

Salvable dead trees—Standing or down trees of commercial species, at least 9.0 inches (22.5 cm) in d.b.h. for softwoods and at least 11.0 inches (27.5 cm) in d.b.h. for hardwoods, containing 25 percent or more sound wood volume and at least one merchantable 12-foot (3.8-m) log if softwood or one merchantable 8-foot (2.5-m) log if hardwood.

Sapling and seedling stands—Stands with a mean diameter (weighted by basal area) less than 5.0 inches (12.5 cm).

Sapling and seedling trees—Live trees of commercial species less than 5 inches (12.5 cm) in d.b.h. with no disease, defects, or deformities likely to prevent their becoming poletimber trees.

Saw log portion—The bole of sawtimber trees between the stump and the saw log top.

Sawtimber stands—Stands with a mean diameter (weighted by basal area) larger than 9.0 inches (22.5 cm) if softwood and larger than 11.0 inches (27.5 cm) if hardwood.

Sawtimber trees—Live softwood trees of commercial species at least 9.0 inches (22.5 cm) in d.b.h. and hardwood trees of commercial species at least 11.0 inches (27.5 cm) in d.b.h. At least 25 percent of the board-foot volume in a sawtimber tree must be free from defect. Softwood trees must contain at least one 12-foot (3.8-m) saw log with a top diameter of not less than 6 inches (15 cm) inside bark; hardwood trees must contain at least one 8-foot (2.5-m) saw log with a top diameter of not less than 8 inches (20 cm) inside bark.

Sawtimber volume—Net volume of sawtimber trees measured in board feet. Net volume equals gross volume less deduction for rot, sweep, crook, and other defects that affect use for lumber.

Scribner rule—The common board-foot log rule used locally in determining volume of sawtimber. Scribner volume is estimated in terms of 32-foot (10-m) logs for softwoods and 16-foot (5-m) for hardwoods.

Site class—A classification of the potential productivity of forest land in terms of mean annual increment.

Site index—A measure of the productivity of forest land in terms of the average height of dominant and codominant trees at a specified age.

Softwoods—Coniferous trees, usually evergreen.

Timber harvest—Volume of roundwood removed from forest land for products.

Timber volume—Includes the net volume in cubic feet of poletimber and sawtimber trees and salvable dead sawtimber trees of all species, the net volume in cubic feet of cull trees of commercial species, and gross volume of noncommercial species. Volume is measured from stump to a minimum 4-inch (10-cm) top outside bark.

Timberland—Forest land capable of producing 20 cubic feet per acre (1.4 m^3/ha) per year of industrial wood, and not withdrawn from timber utilization.

Timberland, deferred—National Forest timberland temporarily withdrawn from timber utilization and under study for possible inclusion in the wilderness system.

Timberland, reserved—Public land withdrawn from timber utilization through statute, ordinance, or administrative order but which otherwise qualifies as timberland.

Upper-stem portion—The bole of sawtimber trees above the saw log top—7.0 inches (18 cm) outside bark for softwoods and 9.0 inches (23 cm) outside bark for hardwoods—to a minimum top diameter of 4.0 inches (10 cm) outside bark, or to the point where the central stem breaks into limbs.

Acknowledgments

This inventory was completed with the cooperation and assistance of many organizations and individuals. The Washington Department of Natural Resources, a cooperator, prepared maps and aerial photos for use in the inventory, and developed equations for estimation of tree volumes; county assessors provided ownership information; the Pacific Northwest Region, USDA Forest Service, and the Olympic National Forest provided forest resource inventory data; timber companies and many individual landowners allowed access to their forest lands.

Metric Equivalents

1,000 acres = 404.7 hectares (ha)
1,000 cubic feet = 28.3 cubic meters (m^3)
1 cubic foot per acre = 0.07 cubic meter per hectare (m^3/ha)
1 foot = 0.3048 meters (m)
1 inch = 2.54 centimeters (cm)
1 mile = 1.609 kilometers (km)

Names of Trees

Common name	Scientific name
Softwoods	
Alaska-cedar	*Chamaecyparis nootkatensis* (D. Don) Spach
Douglas-fir	*Pseudotsuga menziesii* (Mirb.) Franco
Fir, grand	*Abies grandis* (Dougl.) Lindl.
Fir, Pacific silver	*A. amabilis* Dougl. ex Forbes
Fir, subalpine	*A. lasiocarpa* (Hook.) Nutt.
Hemlock, mountain	*Tsuga mertensiana* (Bong.) Carr.
Hemlock, western	*T. heterophylla* (Raf.) Sarg.
Pine, lodgepole	*Pinus contorta* Dougl. ex Loud. var. *latifolia* Engelm.
Pine, western white	*P. monticola* Dougl. ex D. Don
Redcedar, western	*Thuja plicata* Donn ex D. Don
Spruce, Sitka	*P. sitchensis* (Bong.) Carr.
Hardwoods	
Alder, red	*Alnus rubra* Bong.
Ash, Oregon	*Fraxinus latifolia* Benth.
Cottonwood, black	*P. trichocarpa* Torr. & Gray
Madrone, Pacific	*Arbutus menziesii* Pursh
Maple, bigleaf	*Acer macrophyllum* Pursh
Oak, Oregon white	*Quercus garryana* Dougl. ex Hook.
Willow	*Salix* spp.

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Tables

Estimates in this report are developed from statistically based samples and therefore are subject to sampling error. Approximate confidence intervals for estimates of various sizes are presented in the section "Reliability of Inventory Data."

TABLE 1—AREA BY LAND CLASS AND COUNTY, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

LAND CLASS	CLALLAM	GRAYS HARBOR	JEFFERSON	MASON	THURSTON	ALL COUNTIES
			THOUSAND HECTARES			
FOREST LAND:						
TIMBERLAND	286	433	210	195	126	1 251
TIMBERLAND, DEFERRED	3	4	11	3	--	21
TIMBERLAND, RESERVED	69	4	128	8	--	210
OTHER FOREST	42	4	63	8	1	118
TOTAL	401	445	412	214	127	1 600
NONFOREST LAND 2/3/	53	48	55	34	57	248
ALL LANDS 4/	454	493	467	249	185	1 848
			THOUSAND ACRES			
FOREST LAND:						
TIMBERLAND	707	1,070	520	483	311	3,092
TIMBERLAND, DEFERRED	8	10	27	7	--	52
TIMBERLAND, RESERVED	171	10	316	21	1	519
OTHER FOREST	104	10	156	19	3	292
TOTAL	990	1,100	1,018	530	315	3,953
NONFOREST LAND 2/3/	131	118	137	85	141	612
ALL LANDS 4/	1,122	1,218	1,155	616	456	4,567

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Includes cropland, pasture and range, swampland, industrial and rural areas, powerline clearings, railroads, and all improved roads and highways, and water as classified by Renewable Resources Evaluation standards but defined by the Bureau of Census as land.

3/Includes approximately 46,000 acres (19,000 ha) of land managed for Christmas tree production.

4/Source: United States Bureau of the Census, Land and Water Area of the United States, 1960.

TABLE 2—AREA OF TIMBERLAND BY OWNERSHIP CLASS AND COUNTY, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

OWNERSHIP CLASS	CLALLAM	GRAYS HARBOR	JEFFERSON	MASON	THURSTON	ALL COUNTIES
			THOUSAND ACRES			
PUBLIC:						
NATIONAL FOREST	184	131	116	107	--	538
OTHER PUBLIC--						
INDIAN	25	127	4	5	--	161
OTHER FEDERAL	1	1	4	2/	17	23
STATE	149	76	180	55	56	516
COUNTY AND MUNICIPAL	1	50	1	4	3	59
TOTAL	360	385	304	171	76	1,296
PRIVATE:						
FOREST INDUSTRY	272	533	154	176	81	1,215
OTHER PRIVATE--						
FARMER	8	14	3	10	23	57
MISCELLANEOUS	67	139	59	126	132	523
TOTAL	347	686	216	312	236	1,797
ALL OWNERSHIPS	707	1,070	520	483	311	3,092

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Less than 500 acres.

TABLE 3—AREA OF TIMBERLAND BY CUBIC-FOOT SITE AND OWNERSHIP CLASSES, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

SITE CLASS 2/	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
CUBIC FEET	- - - - - - - - - - -		THOUSAND ACRES		- - - - - - - - - - -
225 OR MORE	20	156	330	38	543
165 TO 224	114	286	408	179	988
120 TO 164	162	178	304	131	775
85 TO 119	110	103	117	181	511
50 TO 84	109	18	41	37	204
20 TO 49	24	19	16	14	73
ALL CLASSES	538	759	1,215	580	3,092

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Capacity for cubic-foot annual growth per acre at culmination of mean annual growth in fully stocked natural stands.

TABLE 4—AREA OF TIMBERLAND BY STAND SIZE AND OWNERSHIP CLASSES, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

STAND SIZE CLASS	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
			THOUSAND HECTARES		
SAWTIMBER STANDS:					
LARGE SAWTIMBER 2/	89	34	19	10	153
SMALL SAWTIMBER 3/	42	133	235	108	518
TOTAL	131	167	254	118	671
POLETIMBER STANDS	19	82	102	40	243
SAPLING AND SEEDLING STANDS	59	53	125	66	303
NONSTOCKED AREAS	8	5	12	11	35
ALL CLASSES	217	308	493	235	1 252
			THOUSAND ACRES		
SAWTIMBER STANDS:					
LARGE SAWTIMBER 4/	221	85	46	25	377
SMALL SAWTIMBER 5/	103	329	580	268	1,279
TOTAL	324	414	626	293	1,656
POLETIMBER STANDS	47	203	251	100	601
SAPLING AND SEEDLING STANDS	147	130	310	162	748
NONSTOCKED AREAS	20	13	29	26	87
ALL CLASSES	538	759	1,215	580	3,092

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Large sawtimber includes trees 52.5-centimeter d.b.h. and larger.

3/Small sawtimber includes softwood trees 22.5- to 52.4-centimeter d.b.h. and hardwood trees 27.5- to 52.4-centimeter d.b.h.

4/Large sawtimber includes trees 21.0-inch d.b.h. and larger.

5/Small sawtimber includes softwood trees 9.0- to 20.9-inch d.b.h. and hardwood trees 11.0- to 20.9-inch d.b.h.

TABLE 5—AREA OF TIMBERLAND BY FOREST TYPE AND OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

FOREST TYPE	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
			THOUSAND ACRES		
WESTERN HEMLOCK	213	290	537	68	1,107
DOUGLAS-FIR	196	271	369	187	1,022
WESTERN REDCEDAR	8	57	29	61	155
PACIFIC SILVER FIR	85	14	--	--	99
LODGEPOLE PINE	1	16	16	--	32
SITKA SPRUCE	2	--	19	--	21
GRAND FIR	--	--	--	10	10
ALASKA-CEDAR	2	--	--	--	2
MOUNTAIN HEMLOCK	2	--	--	--	2
SUBALPINE FIR	1	--	--	--	1
RED ALDER	7	100	184	197	487
MAPLE	1	--	14	22	37
COTTONWOOD	1	--	13	--	14
MADRONE	--	--	--	6	6
OTHER HARDWOODS	--	--	7	4	11
UNCLASSIFIED 2/	20	13	29	26	87
ALL TYPES	538	759	1,215	580	3,092

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Unclassified type is less than 10 percent stocked with live trees.

TABLE 6—AREA OF RESERVED AND DEFERRED TIMBERLAND AND OTHER FOREST LAND BY LAND CLASS, FOREST TYPE, AND OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/ 2/]

LAND CLASS AND FOREST TYPE	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
			THOUSAND ACRES		
TIMBERLAND, RESERVED:					
HEMLOCK	--	235	--	--	235
DOUGLAS-FIR	--	167	--	--	167
PACIFIC SILVER FIR 3/	1	105	--	--	106
CEDAR	--	2	--	--	2
TRUE FIRS	--	2	--	--	2
LODGEPOLE PINE	--	4/	--	--	4/
SPRUCE	--	4/	--	--	4/
RED ALDER	--	5	--	--	5
HARDWOODS	--	4/	--	--	4/
ALL TIMBERLAND, RESERVED 5/	1	517	--	--	519
TIMBERLAND, DEFERRED:					
DOUGLAS-FIR	39	--	--	--	39
PACIFIC SILVER FIR 3/	13	--	--	--	13
ALL TIMBERLAND, DEFERRED	52	--	--	--	52
OTHER FOREST LAND:					
LODGEPOLE PINE	--	8	--	--	8
DOUGLAS-FIR	8	--	--	--	8
PACIFIC SILVER FIR 3/	7	--	--	--	7
HEMLOCK-SITKA SPRUCE	6	--	--	--	6
WILLOW	--	--	--	7	7
UNCLASSIFIED 6/	--	257	--	--	257
ALL OTHER FOREST LAND 7/	21	265	--	7	292

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Area of timberland by forest type and ownership class is presented in table 5.

3/Includes fir-spruce type for National Forest.

4/Less than 500 acres.

5/Includes approximately 514,000 acres in Olympic National Park.

6/Information on forest type not available.

7/Includes 257,000 acres of reserved areas.

TABLE 7—VOLUME OF TIMBER ON TIMBERLAND BY CLASS OF TIMBER AND BY SOFTWOODS AND HARDWOODS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

CLASS OF TIMBER	SOFTWOODS	HARDWOODS	ALL SPECIES
		MILLION CUBIC FEET	
SAWTIMBER TREES:			
SAW LOG PORTION	11,483	1,012	12,495
UPPER-STEM PORTION	313	151	463
TOTAL	11,796	1,163	12,958
POLETIMBER TREES	952	710	1,663
ALL GROWING STOCK	12,748	1,873	14,621
SOUND CULL TREES	21	87	108
ROTTEN CULL TREES	31	14	45
SALVABLE DEAD TREES	308	1	309
ALL TIMBER	13,107	1,976	15,083

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 8—VOLUME OF GROWING STOCK AND SAWTIMBER ON TIMBERLAND BY OWNERSHIP CLASS AND BY SOFTWOODS AND HARDWOODS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

OWNERSHIP CLASS	AVERAGE VOLUME	SOFTWOODS	HARDWOODS	ALL SPECIES
	CUBIC METERS PER HECTARE	MILLION CUBIC METERS		
GROWING STOCK: 2/				
NATIONAL FOREST	387	84	1	84
OTHER PUBLIC	365	102	10	112
FOREST INDUSTRY	339	141	25	167
OTHER PRIVATE	216	34	17	51
ALL OWNERSHIPS	331	361	53	414
	CUBIC FEET PER ACRE	MILLION CUBIC FEET		
GROWING STOCK: 3/				
NATIONAL FOREST	5,535	2,952	26	2,978
OTHER PUBLIC	5,217	3,593	366	3,960
FOREST INDUSTRY	4,850	4,997	896	5,893
OTHER PRIVATE	3,088	1,206	585	1,791
ALL OWNERSHIPS	4,729	12,748	1,873	14,621
	BOARD FEET PER ACRE	MILLION BOARD FEET		
SAWTIMBER (INTERNATIONAL 1/4-INCH RULE): 4/				
NATIONAL FOREST	29,520	15,809	72	15,882
OTHER PUBLIC	28,026	20,137	1,135	21,272
FOREST INDUSTRY	25,671	28,127	3,063	31,190
OTHER PRIVATE	14,822	6,521	2,076	8,597
ALL OWNERSHIPS	24,884	70,595	6,346	76,941
SAWTIMBER (SCRIBNER RULE): 4/				
NATIONAL FOREST	23,059	12,360	46	12,406
OTHER PUBLIC	20,864	14,888	949	15,836
FOREST INDUSTRY	19,038	20,558	2,573	23,131
OTHER PRIVATE	10,757	4,494	1,745	6,239
ALL OWNERSHIPS	18,633	52,300	5,313	57,613

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Includes trees 12.5-centimeter d.b.h. and larger.

3/Includes trees 5.0-inch d.b.h. and larger.

4/Includes softwood trees 9.0-inch d.b.h. and larger and hardwood trees 11.0-inch d.b.h. and larger.

TABLE 9—VOLUME OF GROWING STOCK AND SAWTIMBER ON TIMBERLAND BY COUNTY AND OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

COUNTY	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
			MILLION CUBIC METERS		
GROWING STOCK: 2/					
CLALLAM	27	27	38	6	99
GRAYS HARBOR	21	27	68	12	128
JEFFERSON	21	34	22	6	83
MASON	15	10	29	13	67
THURSTON	--	13	11	14	37
ALL COUNTIES	84	112	167	51	414
			MILLION CUBIC FEET		
GROWING STOCK: 3/					
CLALLAM	970	965	1,339	222	3,497
GRAYS HARBOR	744	968	2,388	421	4,522
JEFFERSON	735	1,214	772	202	2,923
MASON	529	357	1,009	458	2,353
THURSTON	--	454	384	487	1,325
ALL COUNTIES	2,978	3,960	5,893	1,791	14,621
			MILLION BOARD FEET		
SAWTIMBER (INTERNATIONAL 1/4-INCH RULE): 4/					
CLALLAM	5,011	5,214	7,221	1,054	18,500
GRAYS HARBOR	4,012	4,761	12,258	1,968	22,999
JEFFERSON	3,753	6,981	4,189	996	15,919
MASON	3,106	1,878	5,504	2,245	12,733
THURSTON	--	2,438	2,018	2,334	6,790
ALL COUNTIES	15,882	21,272	31,190	8,597	76,941
SAWTIMBER (SCRIBNER RULE): 4/					
CLALLAM	3,707	3,882	5,390	767	13,746
GRAYS HARBOR	3,297	3,420	9,019	1,422	17,158
JEFFERSON	2,938	5,358	3,136	717	12,149
MASON	2,464	1,378	4,087	1,619	9,548
THURSTON	--	1,798	1,499	1,715	5,012
ALL COUNTIES	12,406	15,836	23,131	6,239	57,613

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Includes trees 12.5-centimeter d.b.h. and larger.

3/Includes trees 5.0-inch d.b.h. and larger.

4/Includes softwood trees 9.0-inch d.b.h. and larger and hardwood trees 11.0-inch d.b.h. and larger.

TABLE 10—VOLUME OF GROWING STOCK ON TIMBERLAND BY SPECIES AND OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

SPECIES	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
			MILLION CUBIC FEET		
SOFTWOODS:					
WESTERN HEMLOCK	1,348	1,840	2,770	318	6,275
DOUGLAS-FIR	847	1,166	1,637	567	4,218
WESTERN REDCEDAR	166	253	159	241	819
PACIFIC SILVER FIR	481	214	67	1	762
SITKA SPRUCE	61	69	305	55	488
LODGEPOLE PINE	2	43	51	2	98
MOUNTAIN HEMLOCK	27	--	1	--	28
GRAND FIR	1	1	6	19	27
ALASKA-CEDAR	16	--	2	--	18
WESTERN WHITE PINE	2	9	--	3	15
SUBALPINE FIR	2	--	--	--	2
TOTAL	2,952	3,593	4,997	1,206	12,748
HARDWOODS:					
RED ALDER	20	328	785	477	1,610
BIGLEAF MAPLE	5	28	70	79	182
BLACK COTTONWOOD	2/	5	28	11	44
OREGON ASH	--	4	12	7	23
PACIFIC MADRONE	2/	1	1	10	13
OREGON WHITE OAK	--	--	--	1	1
TOTAL	26	366	896	585	1,873
ALL SPECIES	2,978	3,960	5,893	1,791	14,621

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Less than 500,000 cubic feet.

TABLE 11—VOLUME OF SAWTIMBER, INTERNATIONAL ¼-INCH RULE, ON TIMBERLAND BY SPECIES AND OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

SPECIES	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
			MILLION BOARD FEET		
SOFTWOODS:					
WESTERN HEMLOCK	5,629	10,631	15,401	1,699	33,361
DOUGLAS-FIR	5,360	6,212	9,550	3,095	24,216
WESTERN REDCEDAR	972	1,336	740	1,259	4,308
PACIFIC SILVER FIR	3,149	1,338	376	--	4,863
SITKA SPRUCE	432	408	1,800	355	2,995
LODGEPOLE PINE	10	183	210	8	411
MOUNTAIN HEMLOCK	154	--	4	--	158
GRAND FIR	2	--	35	83	121
ALASKA-CEDAR	82	--	11	--	93
WESTERN WHITE PINE	14	30	--	23	66
SUBALPINE FIR	6	--	--	--	6
TOTAL	15,809	20,137	28,127	6,521	70,595
HARDWOODS:					
RED ALDER	48	979	2,607	1,631	5,265
BIGLEAF MAPLE	24	116	250	330	720
BLACK COTTONWOOD	--	18	167	45	230
OREGON ASH	--	22	34	33	89
PACIFIC MADRONE	--	--	5	38	43
TOTAL	72	1,135	3,063	2,076	6,346
ALL SPECIES	15,882	21,272	31,190	8,597	76,941

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 12—VOLUME OF SAWTIMBER, SCRIBNER RULE, ON TIMBERLAND BY SPECIES AND OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

SPECIES	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
			MILLION BOARD FEET		
SOFTWOODS:					
WESTERN HEMLOCK	4,335	8,020	11,334	1,211	24,900
DOUGLAS-FIR	4,056	4,426	6,946	2,153	17,581
WESTERN REDCEDAR	788	911	468	781	2,948
PACIFIC SILVER FIR	2,592	1,096	285	--	3,973
SITKA SPRUCE	381	302	1,362	269	2,314
LODGEPOLE PINE	7	113	128	4	252
MOUNTAIN HEMLOCK	122	--	2	--	124
GRAND FIR	1	--	25	59	86
ALASKA-CEDAR	63	--	8	--	71
WESTERN WHITE PINE	10	20	--	17	47
SUBALPINE FIR	4	--	--	--	4
TOTAL	12,360	14,888	20,558	4,494	52,300
HARDWOODS:					
RED ALDER	29	816	2,179	1,369	4,393
BIGLEAF MAPLE	17	98	215	279	609
BLACK COTTONWOOD	--	16	147	39	202
OREGON ASH	--	18	28	27	73
PACIFIC MADRONE	--	--	4	32	36
TOTAL	46	949	2,573	1,745	5,313
ALL SPECIES	12,406	15,836	23,131	6,239	57,613

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 13—VOLUME OF GROWING STOCK ON TIMBERLAND BY SPECIES AND DIAMETER CLASS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

SPECIES	DIAMETER CLASS (INCHES AT BREAST HEIGHT)										
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 AND LARGER	ALL CLASSES
	MILLION CUBIC FEET										
SOFTWOODS:											
WESTERN HEMLOCK	159	315	443	505	540	539	551	478	1,318	1,426	6,275
DOUGLAS-FIR	112	223	291	306	311	345	352	405	1,074	800	4,218
WESTERN REDCEDAR	30	47	48	48	45	64	57	39	157	286	819
PACIFIC SILVER FIR	8	11	18	24	18	30	30	35	133	453	762
SITKA SPRUCE	9	9	22	20	26	32	23	27	79	241	488
LODGEPOLE PINE	5	13	20	24	15	11	8	2/	2	--	98
MOUNTAIN HEMLOCK	2/	1	1	2	2	1	2	2	6	12	28
GRAND FIR	2	4	2	2	3	4	2	2/	6	2	27
ALASKA-CEDAR	2/	1	1	1	3	1	1	1	4	6	18
WESTERN WHITE PINE	--	4	2	1	--	1	1	--	3	4	15
SUBALPINE FIR	2/	2/	2/	--	--	--	--	2/	2/	2/	2
TOTAL	325	628	846	933	963	1,027	1,026	987	2,782	3,232	12,748
HARDWOODS:											
RED ALDER	96	207	342	284	290	153	132	52	51	4	1,610
BIGLEAF MAPLE	11	20	18	27	22	12	13	16	31	11	182
BLACK COTTONWOOD	1	2	4	2	5	9	2	4	10	7	44
OREGON ASH	3	2	1	8	5	2	3	--	1	--	23
PACIFIC MADRONE	1	1	1	1	2	3	1	--	2	--	13
OREGON WHITE OAK	--	1	--	--	--	--	--	--	--	--	1
TOTAL	111	234	365	321	324	179	151	71	95	22	1,873
ALL SPECIES	436	862	1,211	1,254	1,287	1,206	1,177	1,058	2,877	3,254	14,621

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Less than 500,000 cubic feet.

TABLE 14—VOLUME OF SAWTIMBER, INTERNATIONAL ¼-INCH RULE, ON TIMBERLAND BY SPECIES AND DIAMETER CLASS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1990[1/]

SPECIES	DIAMETER CLASS (INCHES AT BREAST HEIGHT)								
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 AND LARGER	ALL CLASSES
	MILLION BOARD FEET								
SOFTWOODS:									
WESTERN HEMLOCK	2,107	2,696	3,088	3,191	3,387	3,013	8,276	7,604	33,361
DOUGLAS-FIR	1,558	1,762	1,857	2,110	2,196	2,566	6,990	5,177	24,216
WESTERN REDCEDAR	207	238	244	359	332	223	946	1,759	4,308
PACIFIC SILVER FIR	80	132	106	181	185	222	868	3,091	4,863
SITKA SPRUCE	93	99	147	183	145	172	510	1,646	2,995
LODGEPOLE PINE	92	121	80	64	45	1	8	--	411
MOUNTAIN HEMLOCK	3	6	11	4	7	14	38	76	158
GRAND FIR	8	7	16	21	9	2	43	14	121
ALASKA-CEDAR	3	3	16	5	4	4	19	38	93
WESTERN WHITE PINE	6	6	--	4	5	--	18	27	66
SUBALPINE FIR	1	--	--	--	--	1	1	3	6
TOTAL	4,157	5,070	5,565	6,121	6,315	6,217	17,718	19,434	70,595
HARDWOODS:									
RED ALDER	--	1,321	1,610	894	800	308	308	24	5,265
BIGLEAF MAPLE	--	125	123	67	75	94	181	55	720
BLACK COTTONWOOD	--	8	29	56	10	22	61	45	230
OREGON ASH	--	37	26	12	12	--	2	--	89
PACIFIC MADRONE	--	3	10	13	6	--	11	--	43
TOTAL	--	1,493	1,798	1,041	904	423	563	124	6,346
ALL SPECIES	4,157	6,563	7,364	7,162	7,218	6,640	18,280	19,558	76,941

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 15—VOLUME OF SAWTIMBER, SCRIBNER RULE, ON TIMBERLAND BY SPECIES AND DIAMETER CLASS, OLYMPIC PENINSULA, WASHINGTON, JANUARY 1, 1980[1/]

SPECIES	DIAMETER CLASS (INCHES AT BREAST HEIGHT)								
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 AND LARGER	ALL CLASSES
	MILLION BOARD FEET								
SOFTWOODS:									
WESTERN HEMLOCK	1,246	1,753	2,123	2,272	2,497	2,276	6,476	6,258	24,900
DOUGLAS-FIR	873	1,099	1,227	1,452	1,564	1,872	5,267	4,226	17,581
WESTERN REDCEDAR	114	135	148	226	214	144	636	1,332	2,948
PACIFIC SILVER FIR	42	83	69	125	135	168	689	2,661	3,973
SITKA SPRUCE	51	55	95	119	104	125	374	1,393	2,314
LODGEPOLE PINE	53	71	50	41	30	1	6	--	252
MOUNTAIN HEMLOCK	1	3	7	3	5	10	30	66	124
GRAND FIR	4	4	11	14	7	1	34	12	86
ALASKA-CEDAR	2	2	11	4	3	3	15	33	71
WESTERN WHITE PINE	3	4	--	3	3	--	14	21	47
SUBALPINE FIR	2/	--	--	--	--	1	1	2	4
TOTAL	2,389	3,209	3,740	4,257	4,562	4,599	13,540	16,003	52,300
HARDWOODS:									
RED ALDER	--	1,043	1,333	759	694	270	274	22	4,393
BIGLEAF MAPLE	--	99	101	56	64	81	160	48	609
BLACK COTTONWOOD	--	6	24	48	9	19	55	42	202
OREGON ASH	--	30	22	10	10	--	2	--	73
PACIFIC MADRONE	--	2	9	11	6	--	9	--	36
TOTAL	--	1,180	1,489	884	782	370	499	110	5,313
ALL SPECIES	2,389	4,389	5,229	5,141	5,344	4,969	14,039	16,114	57,613

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Less than 500,000 board feet.

TABLE 16—NET ANNUAL GROWTH OF GROWING STOCK AND SAWTIMBER ON TIMBERLAND BY OWNERSHIP CLASS AND BY SOFTWOODS AND HARDWOODS, OLYMPIC PENINSULA, WASHINGTON, 1979[1/]

OWNERSHIP CLASS	AVERAGE VOLUME	SOFTWOODS	HARDWOODS	ALL SPECIES
	CUBIC METERS PER HECTARE	- - - THOUSAND CUBIC METERS - - -		
GROWING STOCK:				
NATIONAL FOREST	2	387	35	422
OTHER PUBLIC	13	3 671	431	4 102
FOREST INDUSTRY	13	5 406	959	6 365
OTHER PRIVATE	8	1 293	612	1 905
ALL OWNERSHIPS	10	10 757	2 036	12 793
	CUBIC FEET PER ACRE	- - - - - THOUSAND CUBIC FEET - - - - -		
GROWING STOCK:				
NATIONAL FOREST	28	13,674	1,226	14,900
OTHER PUBLIC	191	129,709	15,228	144,937
FOREST INDUSTRY	185	191,019	33,886	224,905
OTHER PRIVATE	116	45,689	21,614	67,303
ALL OWNERSHIPS	146	380,091	71,954	452,045
	BOARD FEET PER ACRE	- - - - - - THOUSAND BOARD FEET - - - - - -		
SAWTIMBER (INTERNATIONAL 1/4-INCH RULE):				
NATIONAL FOREST	157	79,635	4,860	84,495
OTHER PUBLIC	987	685,155	64,347	749,502
FOREST INDUSTRY	1,073	1,141,379	162,747	1,304,126
OTHER PRIVATE	638	281,267	88,568	369,835
ALL OWNERSHIPS	811	2,187,435	320,522	2,507,957

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 17—NET ANNUAL GROWTH OF GROWING STOCK ON TIMBERLAND BY SPECIES AND OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, 1979[1/]

SPECIES	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
			THOUSAND CUBIC FEET		
SOFTWOODS:					
WESTERN HEMLOCK	6,256	57,105	106,310	11,006	180,677
DOUGLAS-FIR	4,979	59,703	59,908	22,173	146,762
WESTERN REDCEDAR	319	4,987	6,627	9,435	21,367
PACIFIC SILVER FIR	1,923	2,644	2,682	21	7,271
SITKA SPRUCE	144	3,343	13,724	1,928	19,138
LODGEPOLE PINE	2/-9	1,253	1,242	66	2,552
MOUNTAIN HEMLOCK	2/-14	--	30	--	16
GRAND FIR	10	107	456	1,059	1,631
ALASKA-CEDAR	42	--	40	--	82
WESTERN WHITE PINE	2/-1	569	--	1	568
SUBALPINE FIR	28	--	--	--	28
TOTAL	13,674	129,709	191,019	45,689	380,091
HARDWOODS:					
RED ALDER	1,148	13,909	29,617	17,839	62,512
BIGLEAF MAPLE	75	976	2,562	2,181	5,795
BLACK COTTONWOOD	2/-3	202	1,302	1,015	2,516
OREGON ASH	--	72	361	218	650
PACIFIC MADRONE	5	69	45	329	448
OREGON WHITE OAK	--	--	--	33	33
TOTAL	1,226	15,228	33,886	21,614	71,954
ALL SPECIES	14,900	144,937	224,905	67,303	452,045

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Negative net annual growth is the result of annual mortality exceeding gross annual growth.

TABLE 18—NET ANNUAL GROWTH OF SAWTIMBER ON TIMBERLAND BY SPECIES AND OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, 1979[1/]

SPECIES	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
	THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE				
SOFTWOODS:					
WESTERN HEMLOCK	24,191	320,449	624,815	62,145	1,031,600
DOUGLAS-FIR	47,711	295,456	373,101	145,718	861,986
WESTERN REDCEDAR	2/-305	24,091	34,414	55,335	113,534
PACIFIC SILVER FIR	8,157	17,681	15,569	--	41,407
SITKA SPRUCE	276	19,936	82,822	13,703	116,737
LODGEPOLE PINE	2/-84	6,579	6,870	410	13,774
MOUNTAIN HEMLOCK	2/-301	--	191	--	2/-111
GRAND FIR	32	--	3,315	3,943	7,290
ALASKA-CEDAR	30	--	281	--	310
WESTERN WHITE PINE	2/-59	963	--	13	917
SUBALPINE FIR	2/-9	--	--	--	2/-10
TOTAL	79,635	685,155	1,141,379	281,267	2,187,435
HARDWOODS:					
RED ALDER	3,907	56,395	142,233	67,753	270,288
BIGLEAF MAPLE	953	6,230	8,298	13,384	28,864
BLACK COTTONWOOD	--	481	9,923	4,823	15,227
OREGON ASH	--	1,242	1,981	1,315	4,538
PACIFIC MADRONE	--	--	312	1,294	1,606
TOTAL	4,860	64,347	162,747	88,568	320,522
ALL SPECIES	84,495	749,502	1,304,126	369,835	2,507,957

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Negative net annual growth is the result of annual mortality exceeding gross annual growth.

TABLE 19—AVERAGE ANNUAL MORTALITY OF GROWING STOCK ON TIMBERLAND BY SPECIES AND OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, 1979[1/]

SPECIES	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
			THOUSAND CUBIC FEET		
SOFTWOODS:					
WESTERN HEMLOCK	10,244	4,184	6,549	768	21,745
DOUGLAS-FIR	6,436	3,143	3,551	1,447	14,578
WESTERN REDCEDAR	1,264	567	401	576	2,807
PACIFIC SILVER FIR	3,653	456	156	3	4,268
SITKA SPRUCE	460	155	686	120	1,421
LODGEPOLE PINE	17	114	139	4	274
MOUNTAIN HEMLOCK	206	--	2	--	208
GRAND FIR	7	2	14	50	72
ALASKA-CEDAR	119	--	5	--	124
WESTERN WHITE PINE	18	23	--	7	48
SUBALPINE FIR	12	--	--	--	12
TOTAL	22,435	8,645	11,502	2,976	45,557
HARDWOODS:					
RED ALDER	138	1,951	4,317	2,534	8,939
BIGLEAF MAPLE	36	128	337	317	818
BLACK COTTONWOOD	3	23	53	47	125
OREGON ASH	--	21	84	21	126
PACIFIC MADRONE	1	7	4	49	61
OREGON WHITE OAK	--	--	--	10	10
TOTAL	177	2,130	4,795	2,977	10,079
ALL SPECIES	22,612	10,775	16,296	5,952	55,636

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 20—AVERAGE ANNUAL MORTALITY OF SAWTIMBER ON TIMBERLAND BY SPECIES AND OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, 1979[1/]

SPECIES	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	OTHER PRIVATE	ALL OWNERSHIPS
	THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE				
SOFTWOODS:					
WESTERN HEMLOCK	45,595	22,714	33,951	3,770	106,029
DOUGLAS-FIR	43,412	11,639	16,307	6,070	77,427
WESTERN REDCEDAR	7,873	2,844	1,743	2,901	15,361
PACIFIC SILVER FIR	25,506	2,835	850	--	29,192
SITKA SPRUCE	3,499	894	3,927	775	9,094
LODGEPOLE PINE	85	462	548	19	1,113
MOUNTAIN HEMLOCK	1,247	--	10	--	1,257
GRAND FIR	18	--	83	194	294
ALASKA-CEDAR	666	--	28	--	694
WESTERN WHITE PINE	110	70	--	47	227
SUBALPINE FIR	44	--	--	--	44
TOTAL	128,054	41,457	57,445	13,776	240,732
HARDWOODS:					
RED ALDER	68	3,553	9,187	5,357	18,164
BIGLEAF MAPLE	34	327	587	792	1,740
BLACK COTTONWOOD	--	12	292	120	423
OREGON ASH	--	104	145	96	345
PACIFIC MADRONE	--	--	20	96	115
TOTAL	101	3,995	10,230	6,460	20,787
ALL SPECIES	128,156	45,452	67,675	20,236	261,519

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 21—TIMBER HARVEST BY OWNERSHIP CLASS, OLYMPIC PENINSULA, WASHINGTON, 1950-79

YEAR	NATIONAL FOREST			OTHER PUBLIC 1/			PRIVATE			ALL OWNERSHIPS		
	LIVE	DEAD 2/	TOTAL	LIVE	DEAD 2/	TOTAL	LIVE	DEAD 2/	TOTAL	LIVE	DEAD 2/	TOTAL
						THOUSAND BOARD FEET, SCRIBNER SCALE						
1950	3/	3/	218,700	--	--	--	3/	3/	877,630	3/	3/	1,096,330
1951	3/	3/	241,700	--	--	--	3/	3/	843,922	3/	3/	1,085,622
1952	196,772	105,012	301,784	--	--	--	772,736	18,557	791,293	969,508	123,569	1,093,077
1953	3/	3/	369,100	--	--	--	515,800	68,840	584,640	3/	3/	953,740
1954	310,100	35,800	345,900	--	--	--	612,642	37,647	650,289	922,742	73,447	996,189
1955	124,406	125,773	250,179	315,389	15,350	330,739	543,519	32,548	576,067	983,314	173,671	1,156,985
1956	244,700	22,600	267,300	247,834	7,259	255,093	638,782	20,012	658,794	1,131,316	49,871	1,181,187
1957	228,451	21,513	249,964	133,696	4,679	138,375	524,756	19,201	543,957	886,903	45,393	932,296
1958	233,610	35,318	268,928	156,944	3,630	160,574	442,424	8,639	451,063	832,978	47,587	880,565
1959	297,691	24,608	322,299	190,553	2,477	193,030	636,682	25,391	662,073	1,124,926	52,476	1,177,402
1960	229,629	21,300	250,929	206,085	4,385	210,470	658,599	28,992	687,591	1,094,313	54,677	1,148,990
1961	206,368	13,522	219,890	216,935	4,781	221,716	577,843	29,837	607,680	1,001,146	48,140	1,049,286
1962	253,200	20,100	273,300	236,451	1,027	237,478	558,236	9,212	567,448	1,047,887	30,339	1,078,226
1963	357,500	3,900	361,400	272,729	8,705	281,434	548,961	106,467	655,428	1,179,190	119,072	1,298,262
1964	286,900	116,900	403,800	339,271	9,293	348,564	634,882	156,787	791,669	1,261,053	282,980	1,544,033
1965	308,400	61,400	369,800	447,502	6,177	453,679	664,961	50,796	715,757	1,420,863	118,373	1,539,236
1966	280,714	19,500	300,214	361,971	9,319	371,290	815,672	9,727	825,399	1,458,357	38,546	1,496,903
1967	281,749	9,751	291,500	424,544	3,903	428,447	715,807	4,332	720,139	1,422,100	17,986	1,440,086
1968	315,949	35,465	351,414	541,491	14,013	555,504	796,811	426	797,237	1,654,251	49,904	1,704,155
1969	237,933	10,406	248,339	527,534	8,269	535,803	986,939	1,903	988,842	1,752,406	20,578	1,772,984
1970	239,178	14,769	253,947	478,616	5,700	484,316	815,035	4,735	819,770	1,532,829	25,204	1,558,033
1971	252,886	21,573	274,459	492,065	2,914	494,979	719,827	3,063	722,890	1,464,778	27,550	1,492,328
1972	240,216	35,578	275,794	699,222	4,845	704,067	819,890	806	820,696	1,759,328	41,229	1,800,557
1973	244,990	51,848	296,838	665,983	4,470	670,453	1,135,118	2,959	1,138,077	2,046,091	59,277	2,105,368
1974	257,701	15,688	273,389	565,627	8,295	573,922	1,019,014	12,502	1,031,516	1,842,342	36,485	1,878,827
1975	229,735	12,482	242,217	431,986	17,985	449,971	840,925	14,946	855,871	1,502,646	45,413	1,548,059
1976	278,999	17,076	296,075	671,134	13,767	684,901	853,740	28,630	882,370	1,803,873	59,473	1,863,346
1977	315,139	17,307	332,446	568,465	25,721	594,186	786,833	22,935	809,768	1,670,437	65,963	1,736,400
1978	275,318	27,965	303,283	593,077	22,418	615,495	874,338	23,147	897,485	1,742,733	73,530	1,816,263
1979	304,839	2,895	307,734	796,230	24,881	821,111	928,270	16,730	945,000	2,029,339	44,506	2,073,845

1/ Data for other puolic ownership are combined with private ownership for 1950-54.

2/ Includes snags and down material existing before logging.

3/ Data not available.

Source: 1950-76: Washington timber harvest reports by year (published by Pacific Northwest Forest and Range Experiment Station); 1977-79: Timber harvest reports, State of Washington, Department of Natural Resources.

Bassett, Patricia M.; Oswald, Daniel D. Timber resource statistics for the Olympic Peninsula, Washington. Resour. Bull. PNW-93. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1981. 31 p.

This report summarizes a 1978-79 timber resource inventory of five counties in the Olympic Peninsula of Washington: Clallam, Grays Harbor, Jefferson, Mason, and Thurston. Detailed tables of forest area, timber volume, growth, mortality, and harvest are presented.

KEYWORDS: Forest surveys, statistics (forest), timber resources, resources (forest), Washington (Olympic Peninsula).

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